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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,263	09/25/2003	Yong Wang	12859B-DIV	3226

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EXAMINER	
RIDLEY, BASIA ANNA	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/669,263	WANG ET AL.	
	Examiner	Art Unit	
	Basia Ridley	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 September 2003 and 27 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 22-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 22-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-6, 23-31 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hepp et al. (USP 3,461,183) in view of Saito et al. (SUP 5,935,529).

Regarding claims 1-2, 4, 26 and 28 Hepp et al. discloses a catalyst comprising:

- a zirconia-supported, alkali metal modified ruthenium catalyst (C2/L1-35).

While the reference odes not disclose said catalyst being disposed over a porous substrate, it was known at the time of the invention that catalysts comprising zirconia, alkali metal and ruthenium can be effectively supported on a porous substrate (see Saito et al., C7/L14-58). Therefore, use of said porous substrate to support catalyst of Hepp et al. would be obvious to one of ordinary skill in the art, because it would amount to nothing more than a use of a known material for its intended use in a known environment to accomplish entirely expected result.

While Hepp et al. in view of Saito et al. do not explicitly disclose specific pore size for the porous substrate. The specific pore size and distribution for the porous substrate is not considered to confer patentability to the claims. As the catalyst activity and process efficiency are variable(s) that can be modified, among others, by adjusting pore size and distribution for the porous substrate, the precise pore size and distribution for the porous substrate would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As

such, without showing unexpected results, the claimed pore size and distribution for the porous substrate cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the pore size and distribution for the porous substrate in the catalyst of Hepp et al. in view of Saito et al. to obtain the desired catalyst activity and process efficiency (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

As claim 2 is a product-by-process claim, patentability of said claim is based on the recited product and does not depend on its method of production. Since the product in claim 2 is the same as product disclosed by Hepp et al. in view of Saito et al. the claim is unpatentable even though the Hepp et al. in view of Saito et al. product was made by a different process. In re Marosi, 710 F2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Regarding claims 3, 23-24, 27 and 29 Hepp et al. in view of Saito et al. discloses all of the claim limitations as set forth above. Additionally Hepp et al. discloses the catalyst comprising:

- 0.1 to 10 wt% Ru and 0.1 to 10 wt% K (C2/L1-35);
- 0.2 to 3 wt% Ru and 0.1 to 10 wt% K (C2/L1-35).
- 0.5 to 3 wt% K (C2/L1-35).

Regarding limitations recited in claims 5-6, 30-31 and 33-34 which are directed to specific properties of the catalyst, the examiner notes once a specific catalyst composition is disclosed by the references, as set forth above, the disclosed catalyst will, inherently, display recited properties.

Regarding claim 25, while Hepp et al. in view of Saito et al. do not explicitly disclose specific BET surface area of ZrO2, the specific BET surface area of ZrO2 is not considered to

confer patentability to the claims. As the catalyst activity and process efficiency are variable(s) that can be modified, among others, by adjusting BET surface area of ZrO2, the precise BET surface area of ZrO2 would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed BET surface area of ZrO2 cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the BET surface area of ZrO2 in the catalyst of Hepp et al. in view of Saito et al. to obtain the desired catalyst activity and process efficiency (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

2. Claims 22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hepp et al. (USP 3,461,183) in view of Saito et al. (SUP 5,935,529) in view of Tonkovich et al. (US 2003/0072699).

Regarding claims 22 and 32 Hepp et al. in view of Saito et al. all of the claim limitations as set forth above, but the references do not disclose said substrate comprising FeCrAlY and/or a felt.

It was known at the time of the invention that substrates comprising a FeCrAlY felt can be effectively supported for supported noble metal catalysts (see Tonkovich et al. [0083]). Therefore, use of said FeCrAlY felt to support catalyst of Hepp et al. would be obvious to one of ordinary skill in the art, because it would amount to nothing more than a use of a known material for its intended use in a known environment to accomplish entirely expected result.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

4. In view of the foregoing, none of the claims are allowed.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (571) 272-1453.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Technical Center 1700 General Information Telephone No. is (571) 272-1700. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Basia Ridley
Examiner
Art Unit 1764

BR
April 4, 2005